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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,821	12/08/2006	Manfred Lenhart	HER07 P-115	4901
28101 7590 12/09/2009 VAN DYKE, GARDNER, LINN & BURKHART, LLP SUITE 207 2851 CHARLEVOIX DRIVE, S.E. GRAND RAPIDS, MI 49546				
EXAMINER FREAY, CHARLES GRANT				
ART UNIT		PAPER NUMBER		
3746				
MAIL DATE		DELIVERY MODE		
12/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/572,821

**Applicant(s)**

LENHART, MANFRED

**Examiner**

Charles G. Freay

**Art Unit**

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date 5/2007
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plate cam circumferential edge being supported on a wall of the housing (Claim 9) and the circumferential support surface providing a wrap-around sliding seal (Claim 10), and the plate cam at it's circumference is supported on a separate wear ring (Claim 12) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claims 1, 3, 5 objected to because of the following informalities:

In claim 1 lines 2 and 5 reference is made to concrete and also to a high-viscosity material, consistent terminology should be used throughout the claims;

In claims 3 and 5 at line 2 "has" should be "have";

. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9, 10 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims all set forth that the circumference (i.e. the outer radial surface) of the plate cam supports the plate cam. As shown in Fig. 1 the outer radial edge of the plate cam is spaced from the housing 7 and therefore cannot support the plate cam 15.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is vague and indefinite because it is unclear if the phrase "in particular, concrete" is intended to further limit the claim.

Claim 1 lines 13 and 14 are confusing because it is unclear if the phrase "connecting at least one feed cylinder over its entire cross-section to said feed line in any position of said changeover valve". Means that there is always one of the two cylinders connected to the feed line or if there is one cylinder which is always connected to the feed line. Furthermore it is unclear what "its" refers to. The hollow body or said at least one feed cylinder.

In claim 1 line 17 it is unclear what "its" refers to.

In claim 1 lines 19-21 are confusing because reference is made to the plate cam further including "an intake opening". This is confusing because an intake opening has already been set forth in association with the hollow body. In this claim and in the claims dependant therefrom the references to "said intake opening" are unclear since it cannot be determined with certainty which opening is being referred to.

In claim 1 lines 20 and 21 reference is made to a sufficient distance with regards to the plate cam. And the arrangement is said "to cover an opening". It is unclear if it is the spaces between the openings which are actually covering, i.e. closing, the opening,

or if one of the openings is sized large enough to be covering or be over, i.e. open to, the other inlet opening.

Claim 7 recites the limitation "said kidney-shaped inlet opening" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 is vague and indefinite because in line 3 it is unclear what element is associated with "on one side".

In claim 17 line 5 there is no antecedent basis for "the inlet opening". Similarly in line 7 there is no antecedent basis for "the discharge opening".

In claim 17 lines 8 and 9 there is no antecedent basis for "the opening" or the "at least one feed cylinder".

In claim 17 lines 5 and 6 and also in lines 18 and 19, it is unclear of the inlet opening "covering both feed cylinders" means the cylinders are open or closed.

In claim 17 lines 11 and 12 there is no reference frame for the sealing face of the plate cam "the runs ahead of the inlet opening".

In claim 17 line 20 it is unclear what is meant by "to match one another".

Throughout claims 17-25 the following terms, which represent various phases of the pump stroke/operation have not been defined: "pump lift", "pump-lift mode", "synchronous phase", "precompression phase", "pump phase", "start-up ramp", "rundown ramp", relaxation phase". The various phases and what they represent have not been defined and reference frames for judging them have not been set forth.

In claim 20 line 3 it is unclear if "in particular at half the normal..." is intended to further limit the claim.

***Allowable Subject Matter***

Claims 1-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art neither discloses nor makes obvious a two-cylinder slurry pump as claimed having a diverter valve including a hollow body that narrows from an inlet opening which connects at least one of the feed cylinders to the feed line in any position and also includes a plate cam having another inlet opening arranged at a sufficient distance from the first inlet opening to cover an opening of one of the feed cylinders completely. The prior art also does not make obvious the process for controlling a slurry pump having a diverter valve with an inlet opening designed to cover both feed cylinders in at least one position and having sealing faces that close the feed cylinder openings at predetermined positions, including closing the opening of each feed cylinder with the sealing face of a plate cam that runs ahead of the inlet opening, performing a precompression stroke with one cylinder while operating the ram of the other in a pump lift mode, then controlling both rams in a synchronous phase.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Simmons, Riker and Hudelmaier disclose slurry pumps and

methods of operating the same. Schelcht and Yoshikawa disclose diverter valves for slurry pumps.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles G Freay/  
Primary Examiner  
Art Unit 3746